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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/640,367	08/13/2003	John A. Reeve	MSH - 245	8435
8131	7590	04/25/2006	EXAMINER	
MCKELLAR IP LAW, PLLC 784 SOUTH POSEYVILLE ROAD MIDLAND, MI 48640				TUROCY, DAVID P
		ART UNIT		PAPER NUMBER
		1762		

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/640,367  
Filing Date: August 13, 2003  
Appellant(s): REEVE, JOHN A.

**MAILED**  
APR 25 2006  
**GROUP 1700**

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Robert McKellar  
For Appellant

**EXAMINER'S ANSWER**

- This is in response to the appeal brief filed 1/23/2006 appealing from the Office action
- mailed 5/16/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

**WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. Applicant's arguments with respect to the obvious double patenting have been fully considered and are persuasive. Claims 4-6, 9, 20, 26, and 32 are provisionally rejected under the judicially created

- doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 20 of copending Application No. 10/052002.

#### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### **(8) Evidence Relied Upon**

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

US Patent Publication 2002/0048679 A1 Lohmer et al.

US Patent 4632848 Gosset et al.

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 10-34, 36-38, 40-41, 43-45, 47-48, 50-52, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Publication 2002/0048679 by Lohmer et al ("Lohmer") in view of US Patent 4632848 by Gosset et al ("Gosset").

Claims 1-3: Lohmer teaches of a method for treating a solid substrate comprising reacting the substrate with a reactive silane and then reacting the treated surface with a hydrophobic compound that ensures water-repellency (Abstract, Paragraph 0053).

Lohmer discloses that the reactive compounds can be applied by spraying, brushing, or immersing (paragraph 0049). Lohmer fails to disclose reacting the substrate with a

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silicon containing material selected from the group consisting of multi-silanol, siliconates, silicates, and any combination thereof.

Claims 10-15: Lohmer discloses a reactive silane as an organofunctional silane (Paragraph 0014-0019).

Claims 16, 21-22, 27-28, and 33: Lohmer discloses a reactive silane as a trimethoxysilane (Paragraph 0021).

Claims 17-19, 23-25, and 29-31: Lohmer discloses a reactive silane comprising an aminoorganofunctional silane with a general formula that encompasses the general formula as claimed (Paragraphs 0014-0019).

Claims 20, 26, and 32: Lohmer discloses a substrate of polyurethane, polyethylene, and other hard surfaces (Paragraph 0059-0063).

Claims 36-38, 43-45, 50-52: Lohmer discloses using a reactive silane comprising a disilane with a  $-\text{SiC}_y\text{Si}-$  linkage when selecting  $\text{R}^4 = -\text{Si}(\text{CH}_3)_3$  and  $\text{R}^3 = \text{C}_1-\text{C}_{12}$  alkyl radical (Paragraphs 0014-0019).

Claims 34, 41, and 48: Lohmer discloses a reactive silane as an oligomer siloxane (paragraph 0027).

Claims 40, 47, and 54: Lohmer discloses a solid substrate with the coating treatment as above (Abstract).

Lohmer teaches of a method of treating a solid substrate comprising reacting the substrate with a silane and then coating the surface with a *hydrophobic compound*. Lohmer discloses successful hydrophobic compounds include ones containing functional groups and lists various exemplary compounds (Paragraph 0052-0054). However, Gosset, teaching of forming a protective coating on a surface, discloses using

a hydrophobic compound, potassium silicate, to improve the resistance to water  
(Column 4, lines 10-18).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Lohmer to use the hydrophobic compound suggested by Gosset to provide a desirable water repellent coating because Lohmer teaches applying a hydrophobic compound after a reactive silicon provides a permanent hydrophobic coating and Gosset teaches a hydrophobic compound which improves a coatings resistance to water.

Gosset in view of Lohmer fail to teach of a specified time between coatings. The examiner acknowledges the appellants showing that "essentially, immediately" is in meant to be within ½ hour of application. However, it is the examiners position that such a showing lacks criticality and that it is within the skill of one ordinary skill in the art at the time of the invention to determine the suitable time period between the two subsequent coatings to properly allow for a reaction to take place and thus provide a water repellent coating. Therefore, it would have been obvious to one having ordinary skill in the art to have determined the optimum time between to subsequent reactions through routine experimentation in the absence of a showing of criticality. See *In re Aller*, USPQ 233 (CCPA 1955).

#### **(10) Response to Argument**

The appellant has argued against the Gosset et al. reference stating that since the potassium silicate is within the coating material one of ordinary skill in the art would

not be motivated to separate the potassium silicate from the entire coating composition.

The examiner respectfully disagrees.

- Lohmer teaches of a method of treating a solid substrate comprising reacting the substrate with a silane and then coating the surface with a *hydrophobic compound*.

Lohmer discloses successful hydrophobic compounds include ones containing functional groups and lists various exemplary compounds (Paragraph 0052-0054).

- However, It is the examiners position that such a listing of hydrophobic compounds is not exhaustive and therefore various other hydrophobic compounds can reasonably be expected to effectively provide a solid substrate with water repellency.

The examiner agrees Gosset et al utilizes potassium silicate within a coating material, however, Gosset et al discloses various compounds, including potassium silicate, each of which includes a functional group, to imparting water repellency.

One of ordinary skill in the art would reasonably expect the compounds, as taught by Gosset et al, to impart hydrophobic properties in the coating process as taught by Lohmer.

Additionally, Lohmer teaches, at paragraph 0054, hydrophobic compounds proven successful contain a functional group and disclose one embodiment of the

- functional group as a carboxyl group, which is shown here as  $\begin{array}{c} \text{HC} \\ \parallel \\ \text{O} \\ | \\ \text{OH} \end{array}$  Alternatively, Gossett, at Column 4, lines 15-22, discloses examples of hydrophobic compounds and discloses using either a silicate, shown here as  $\begin{array}{c} \text{H} \\ | \\ \text{Si} \\ \parallel \\ \text{O} \\ | \\ \text{O} \end{array}$ , or a carboxyl group.

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Therefore taking the references collectively, it would have been obvious to one skilled in the art at the time of the invention to modify Lohmer to use the hydrophobic silicate as suggested by Gossett with a reasonable expectations of success because Lohmer discloses applying a hydrophobic compounds which contain a functional group such as a carboxylate group and Gossett discloses a silicate is a known hydrophobic compound and as shown above siliconates have similar functionality to a carboxyl group. Please note that the test of obviousness is not an express suggestion of the claimed invention in any or all references, but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them (*In re Rosselet*, 146 USPQ 183).

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

David Turocy

AU 1762 

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